

Lower Snake River Objectives

Ed Bowles (ID) edits to Paul Wagner (NMFS) draft of February 7, 2000

Manage reservoirs to be as full as possible by the start of the migration season.

Determine available water supply ~~for the~~ **each** migration year.

Assure contracts are in place to provide 427 kaf from upper Snake River storage.

Shift flood control releases to the maximum extent possible to benefit ~~Snake River flows~~ **fish migration** and shape flood control and spring runoff to the maximum extent possible into the juvenile migration season which begins early to mid April.

~~Maintain flows of a least 85 kcfs~~ **Strive to ensure flows do not drop below 100 kcfs** at Lower Granite ~~throughout~~ **during** the spring passage ~~migration~~ season. ~~emphasizing the period mid April through mid June.~~

~~Manage reservoir refill in the spring to achieve a 95% probability of refilling Brownlee and Dworshak reservoirs by July 4. Utilize reservoir storage as required to maintain spring flows in the 85 to 100 kcfs range.~~ **Manage reservoirs to maximize refill, subordinate to helping ensure Lower Granite flows do not drop below 100 kcfs. Or, Utilize inseason management, based on needs of the fish, to balance reservoir refill in June with helping ensure springtime flows at Lower Granite do not drop below 100 kcfs.**

~~Provide~~ **Maximize** juvenile spillway passage at lower Snake River dams by spilling to **the full extent** ~~allowable~~ **by** State standards during ~~schedules defined by the BiOp~~ **the spring migration period. Begin spill test for summer migrants.**

Operate turbines within 1% of peak efficiency March 15 through November 30.

Maintain minimum operating pool elevations at all reservoirs on the lower Snake River from April 1 until juvenile numbers decrease to low numbers in the fall.

Utilize a "spread the risk" transportation strategy based on annual pre-season projections of in-river migration conditions. Transport all fish collected from Snake River projects ~~with the exception of PIT tagged fish~~ **except those required for research.**

Control temperature and augment flow to the extent practicable during the fall chinook migration season.

Utilize Brownlee ~~Reservoir~~ **Reservoir** to augment summer flow and shape BOR's upper Snake River water to the maximum extent possible early in the summer season when Brownlee water temperatures are still cool **and before lower Snake River water temperatures become critical.**

Utilize Dworshak as a source of augmentation water during the summer **and fall** migration season to provide both temperature and flow benefits **to listed juvenile and adult salmon and steelhead.**

Apply modeling techniques to determine the temperature benefits achieved by using Dworshak and Brownlee reservoirs at defined outflows on defined dates and use these results to plan release schedules.

Use results of temperature modeling and adult behavioral information to decide whether releases from Dworshak should occur during September to improve adult migration conditions.